

Meningococcal disease

Updated 11/05

Meningococcal disease is caused by the bacterium *Neisseria meningitidis*. The organism may be found in the upper airway, specifically the nasopharynx, in 5-10% of persons without causing symptoms or illness. Severe illnesses resulting from infection by this organism include sepsis (meningococemia) and meningitis. Both may occur together. Most cases occur in those less than age 5, and susceptibility decreases with age. Those who are deficient in specific areas of their immune system, those who do not have a functional spleen and household contacts or those with direct exposure to a patient's secretions are at highest risk. College freshmen, particularly those living in dormitories or residence halls, are at modestly increased risk for meningococcal disease compared with persons the same age who are not attending college. Historically, 50% of those with meningococcal illness died, but with early diagnosis, modern therapy and supportive measures, the case-fatality rate is now between 5% and 15%.

Transmission

- Person to person through respiratory droplets (i.e., coughing or sneezing)
- Through saliva (kissing, sharing eating utensils or drinks, or cigarettes)
- The organism is usually present in a person for 3-4 days before any illness occurs, but it may cause illness anytime between 2 to 10 days from the time of acquisition.

Symptoms

- Sudden fever, intense headache, nausea and often vomiting
- Stiff neck
- Characteristic rash

Treatment/Care

- Penicillin, ampicillin, chloramphenicol, and ceftriaxone
- Corticosteroids are used to reduce brain swelling and inflammation

Complications

- Delirium, coma, shock, and death
- Brain damage, hearing loss, or learning disability in 10 to 20% of survivors

Prevention

- Reduce the chance of direct droplet or saliva exposure to human cases
- Routine hygiene procedures, such as covering one's mouth while sneezing or coughing, and by not sharing utensils, drinks, and cigarettes
- Vaccines are available, and will prevent illness from four strains of the bacteria (serogroups A, C, Y, and W-135). Neither vaccine is recommended for children less than age 2.
- Close contact to acute cases are at risk of infection and must be promptly treated with prophylactic antibiotics to prevent disease.

Florida typically has over 100 cases of meningococcal disease (meningitis and/or sepsis) each year, almost occurring as isolated cases.

More information

http://www.cdc.gov/ncidod/dbmd/diseaseinfo/meningococcal_g.htm

<http://www.who.int/mediacentre/factsheets/fs141/en/>